



# Sensible Salting and Salt Reduction Initiatives

## DPW/HIGHWAY OPERATIONS



# Pre-Wet Salting

- Spraying Salt Brine on the salt as it comes off the spinner.
- Reduces salt bounce which leads to the salt staying on the paved surface where we want it not in the shoulder or ditches.
- 20 to 30 % saving for this alone.
- Activates salt immediately. No waiting for precipitation moisture to create brine.
- Salt Brine Solution contains 23% salt. The oceans are about 3.5 %.
- 23% solution requires 2.33 pounds of salt/gallon of water.



# Pre-Wet Salting Equipment



# Anti Icing

- Spraying Roadways with Salt brine prior to storm.
- Places a fine layer of salt on roadway so that when the first snow falls, the moisture in the snow creates salt brine to keep the snow/ice from bonding to the pavement.
- In small storms <1" or frost events this may be adequate treatment requiring no additional applications.
- Gives snow crews a "head start" on de-icing applications.





# New Technology

- Anti-icing and prewet with the same unit.
- Unit capacity is 6 tons of salt with 450 gallons of brine.
- Spinner speed variable up to 1200 RPM.
- Spreads up to 36 feet wide.
- Is capable of spreading directionally left or right across that 36 feet. 24 left and 12 right.
- Capable of spraying 100 % liquid or applying 100% salt with 12 presets in between i.e. 70% liquid 30% granular material.



# New Technology

- Anti-icing and prewet with the same unit.
- Unit capacity is 6 tons of salt with 450 gallons of brine.



# New Technology

- Substantial Salt Savings

	Seasonal			
Nissen	Salt	Calcium	Brine	Snow
10_11	708.50	5220	19690	85.9
9_10	628.225	150	0	29.2
08_9	1236.625	900	0	89.8
Diff 08-09	528.13 Tons			
Gruendeman				
10_11	604.5	1452	19615	85.9
9_10	3295.06	48	0	29.2
08_9	1100.125	192	0	89.8
Diff 08-09	495.625 Tons			
Tordik				
10_11	522.75	1450	21300	85.9
9_10*	759.58	0	0	29.2
08_9*	1188	0	0	89.8
Diff 08-09	665.25 Tons			

# New Technology

- Substantial Salt Savings

Salt per ton = \$53.16

Brine per Gallon = \$0.17

Calcium per Gallon = \$0.58

Difference Cost		Total Salt Savings	Brine Use	Cost	Brine Cost
528.13	\$53.16	\$28,075.13	19690	\$0.17	\$3,347
495.625	\$53.16	\$26,347.43	19615	\$0.17	\$3,334
665.25	\$53.16	\$35,364.69	21300	\$0.17	\$3,621
		<u>\$89,787.24</u>			<u>\$10,302</u>

<b>Total Salt Savings</b>	<b>\$79,484.39</b>
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# Alternative Materials

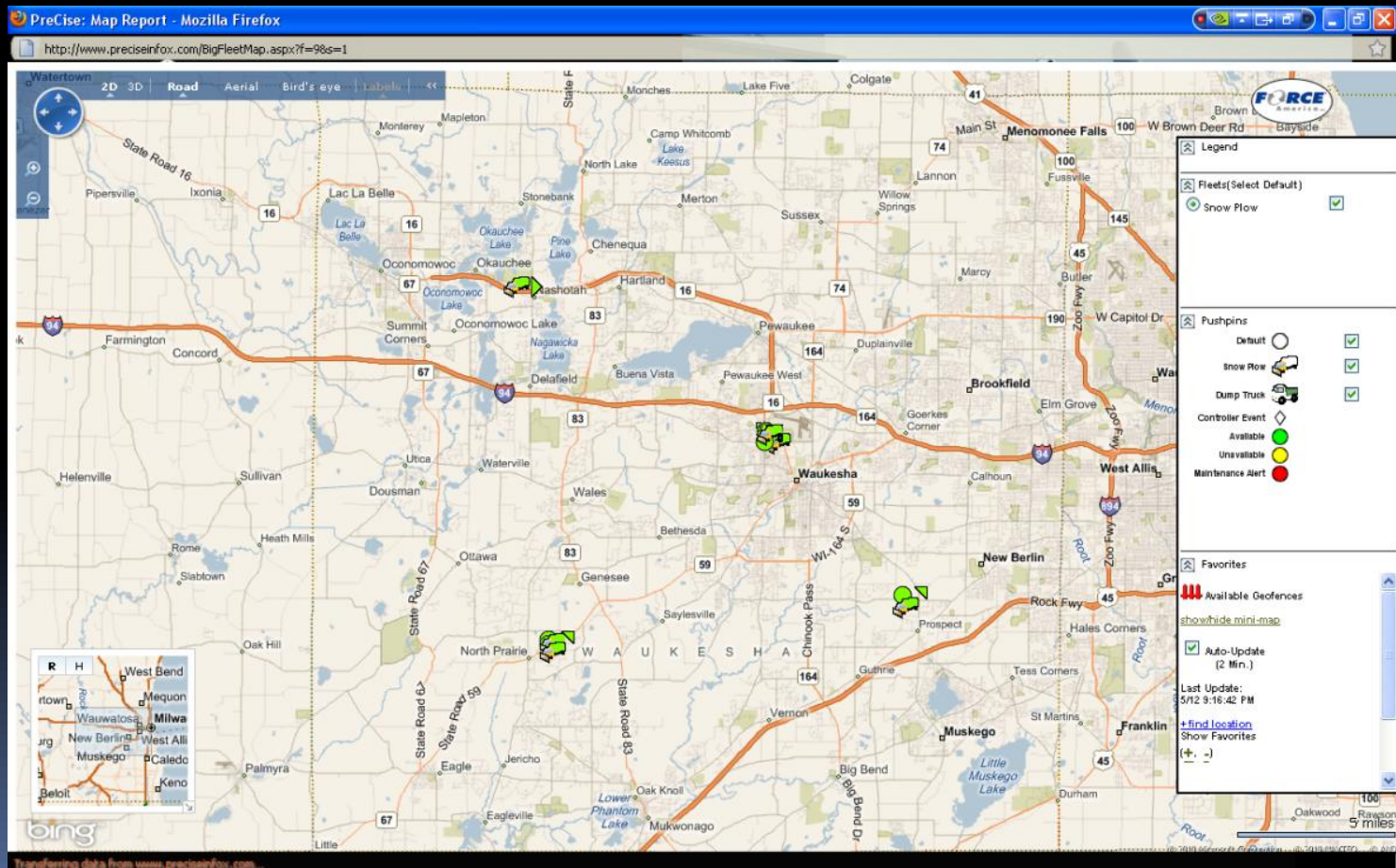


- Geo melt 55 (Beet Juice)
- Reduces salt use up to 30%
- Effective to- 30° below zero when mixed with salt
- Anti-Corrosive Properties
- Reduces labor costs
- No Bridging / Freezing
- Multi-day Residual
- <http://www.snisolutions.com>

# AVL/GPS & MDSS

## Automatic Vehicle Location and Maintenance Decision Support System

- Can installation of these systems save money and reduce salt usage?





# CONTROL BOX

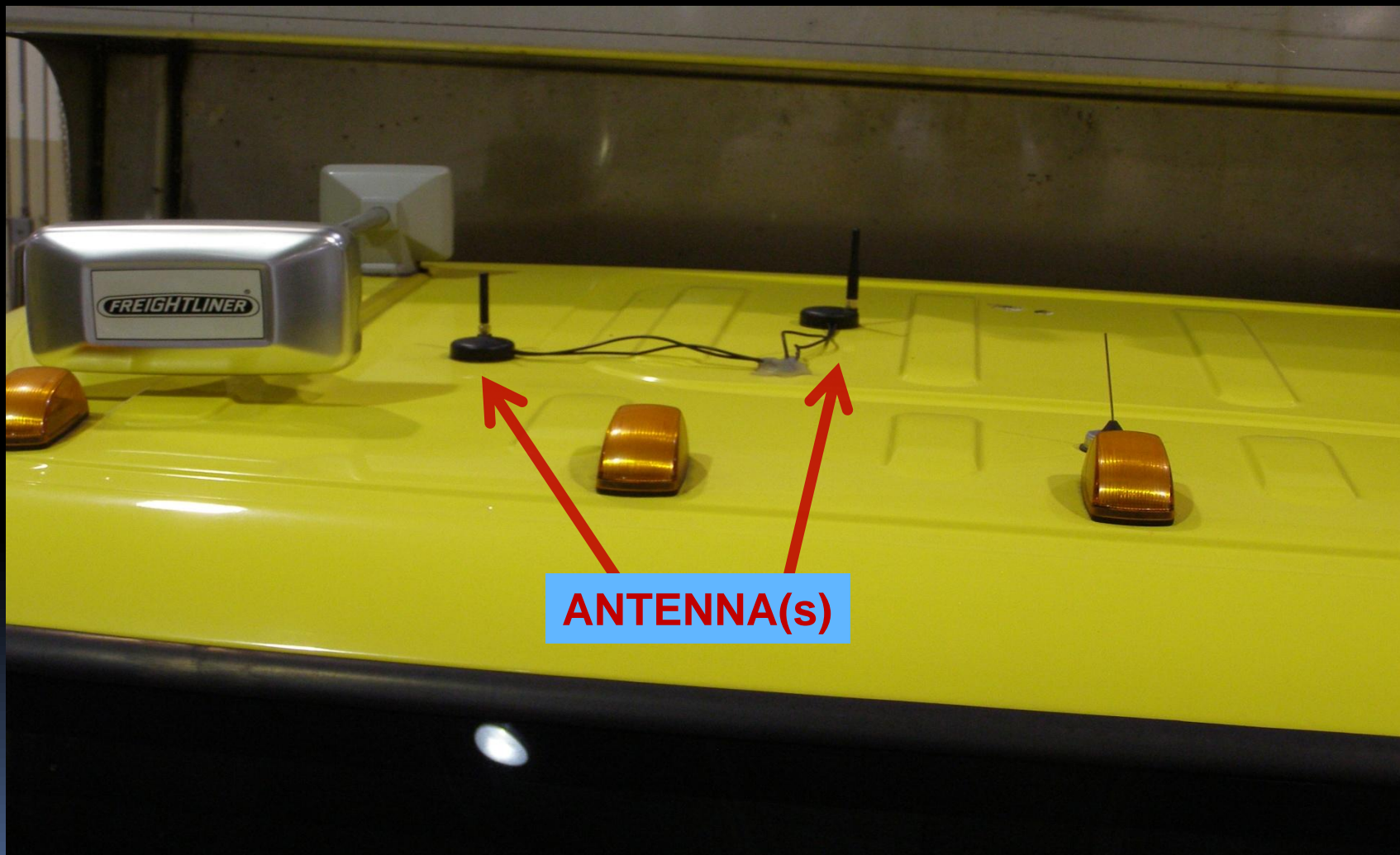


**CONTROL BOX**  
mounted under  
passenger seat





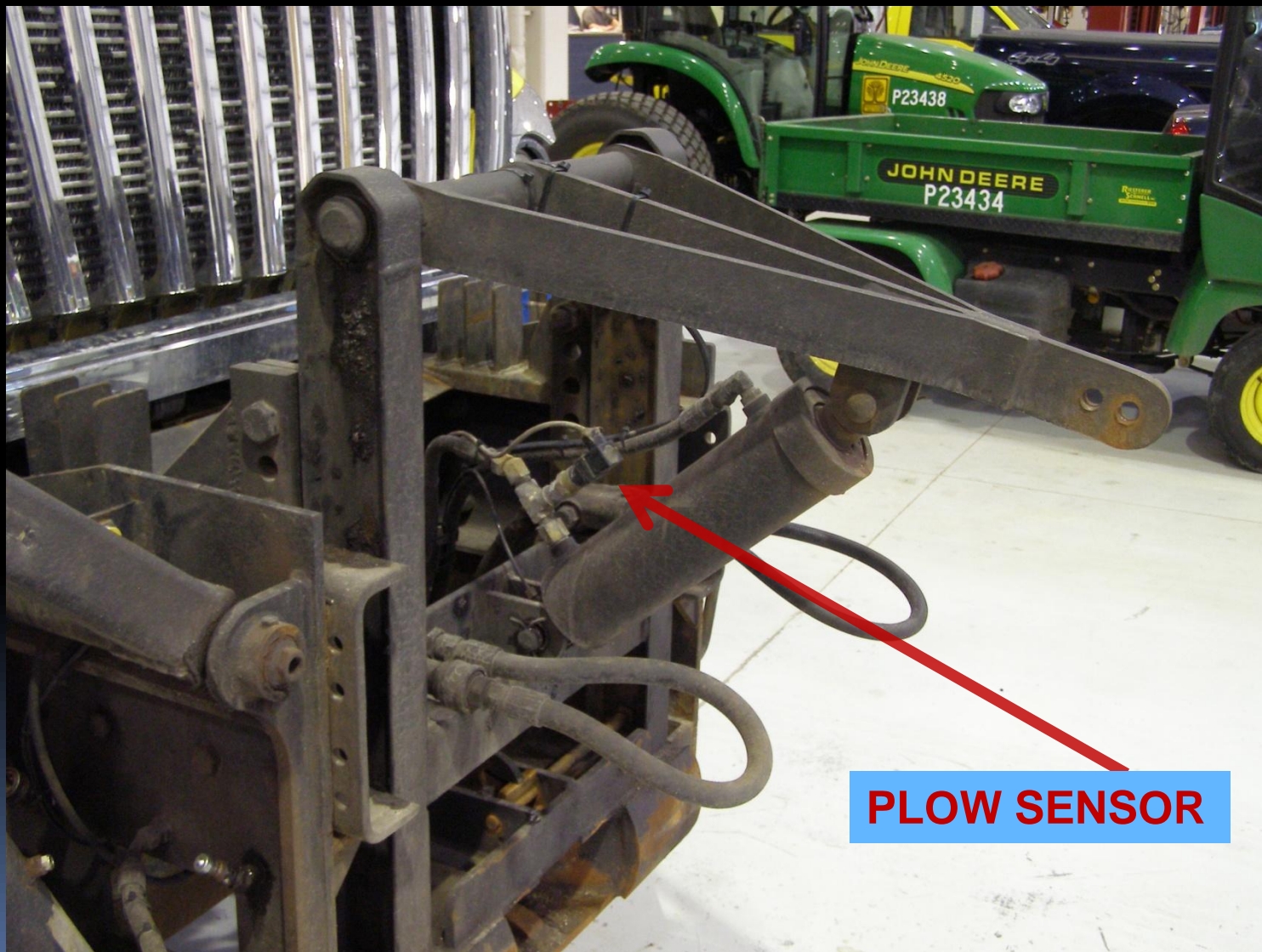
# ANTENNA(S)



ANTENNA(S)



# PLOW SENSOR

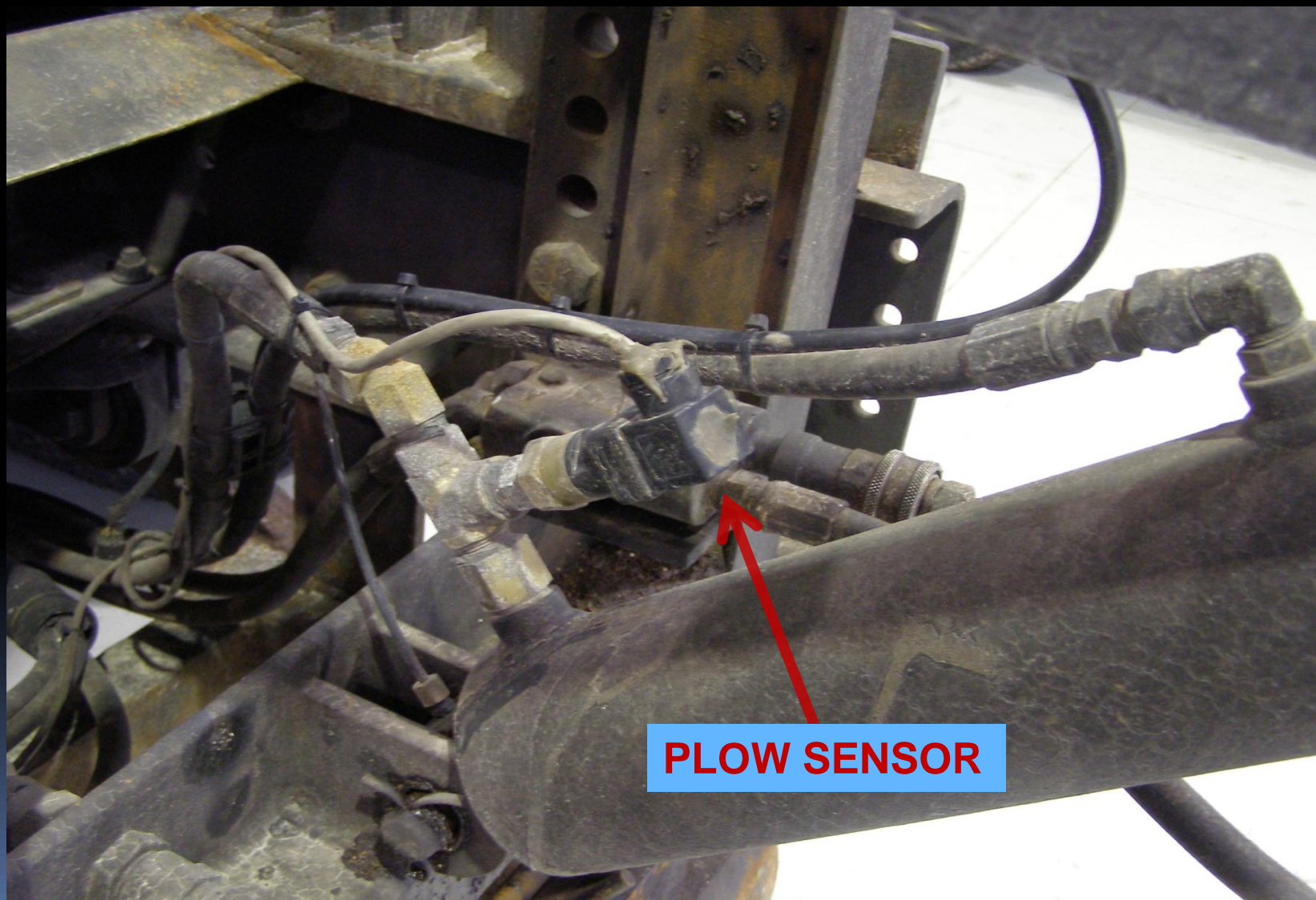


**PLOW SENSOR**





# PLOW SENSOR

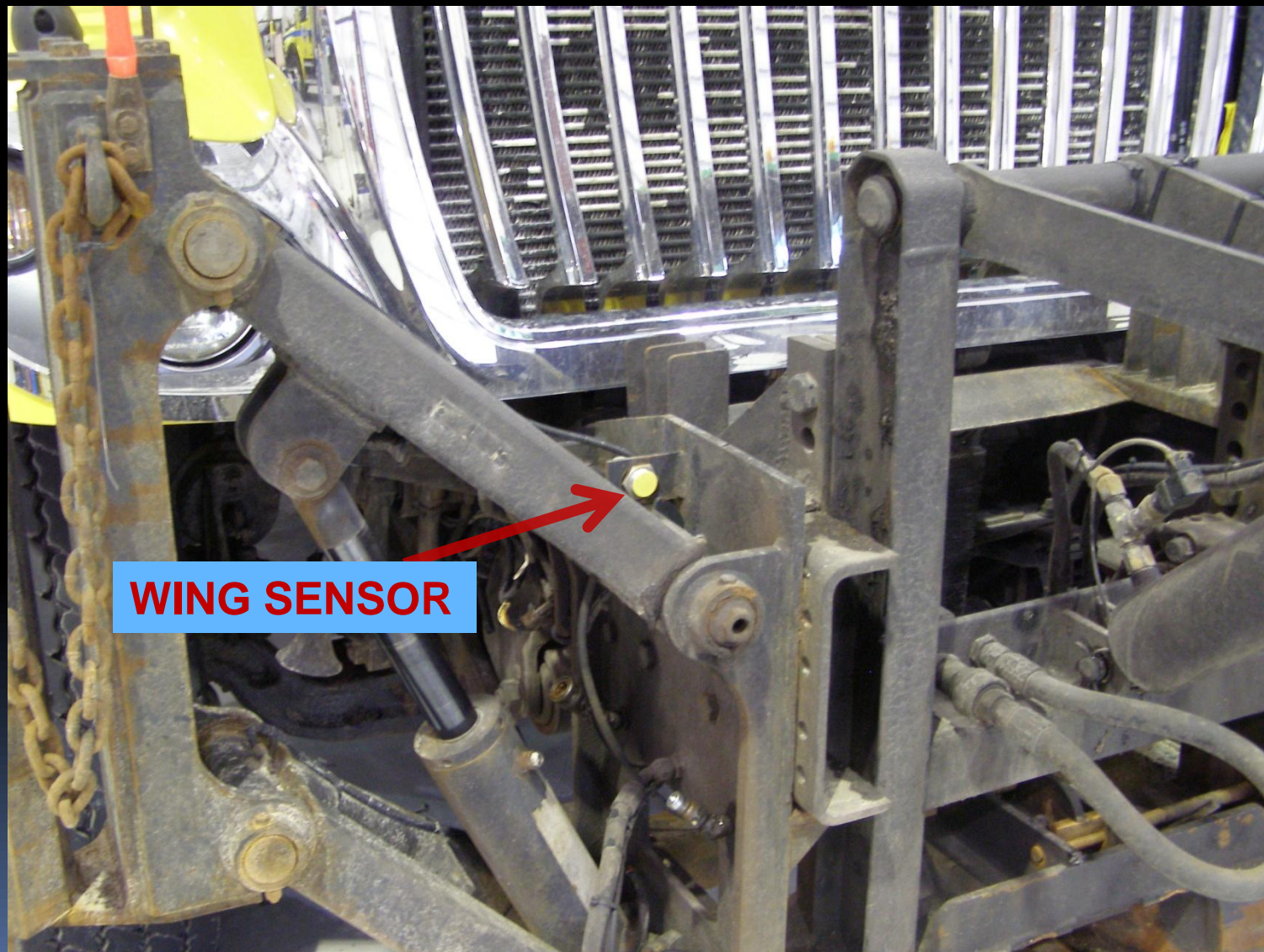


**PLOW SENSOR**





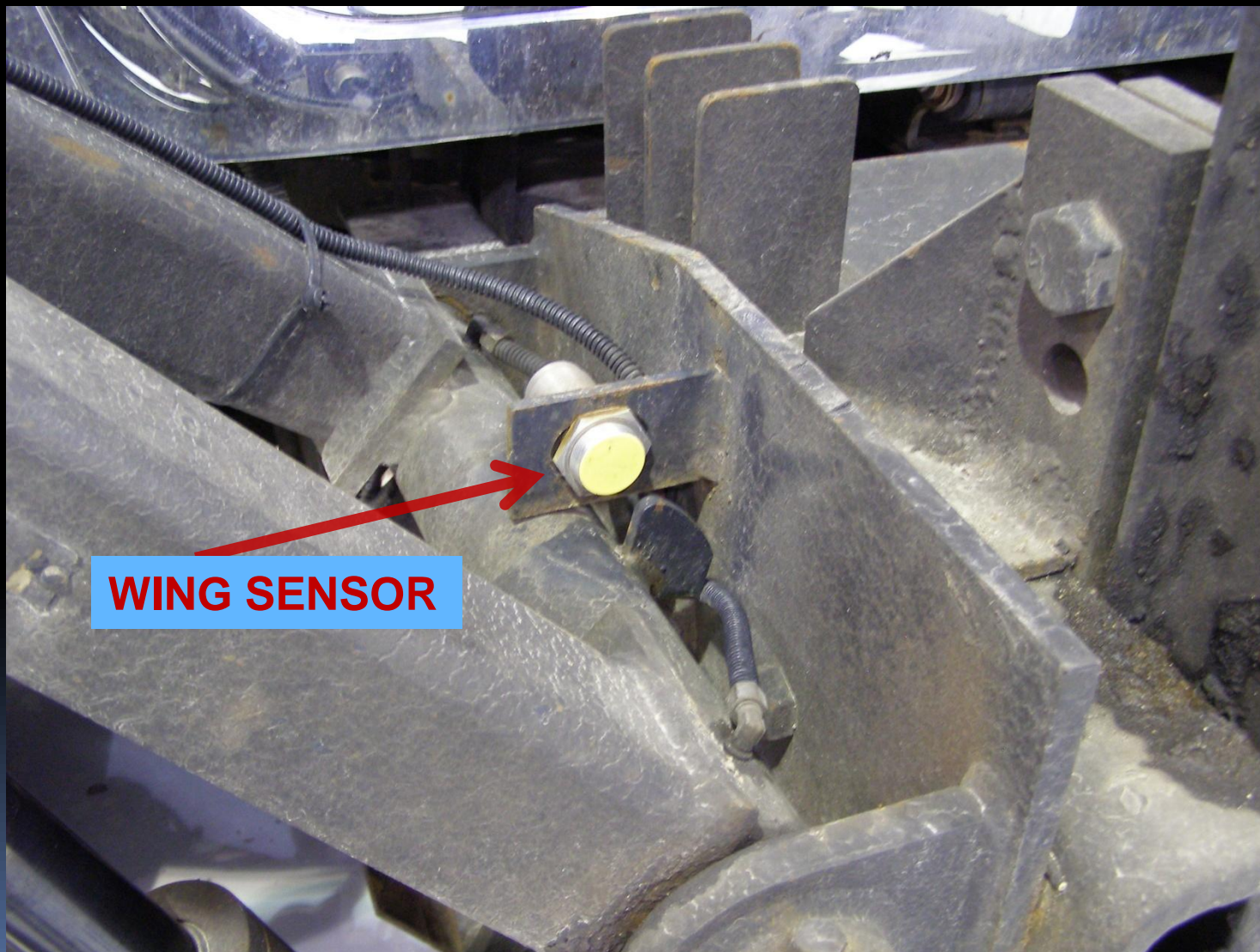
# WING SENSOR







# WING SENSOR

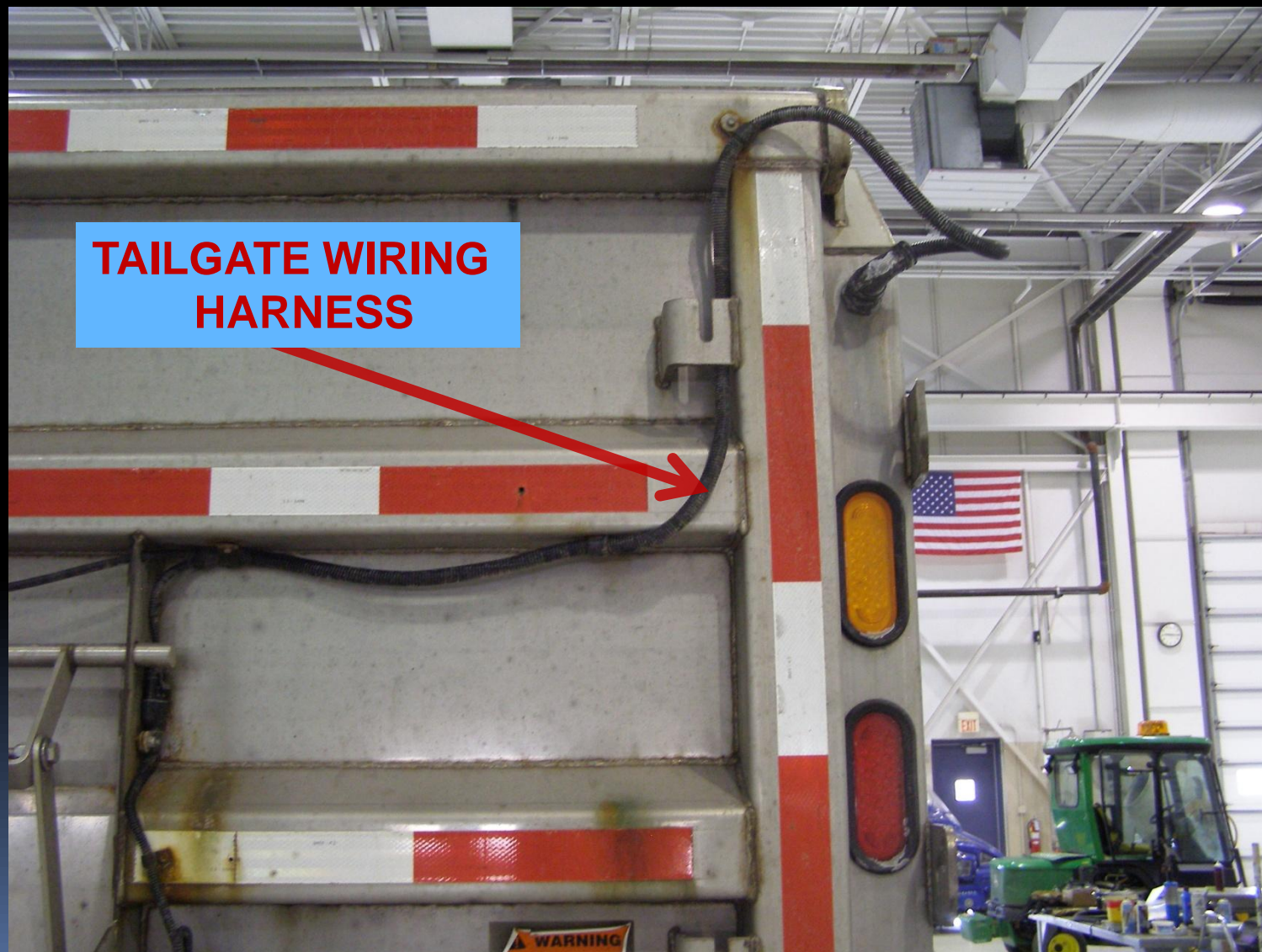


**WING SENSOR**





# TAILGATE WIRING HARNESS





# TAILGATE WIRING HARNESS



**TAILGATE WIRING  
HARNESS**

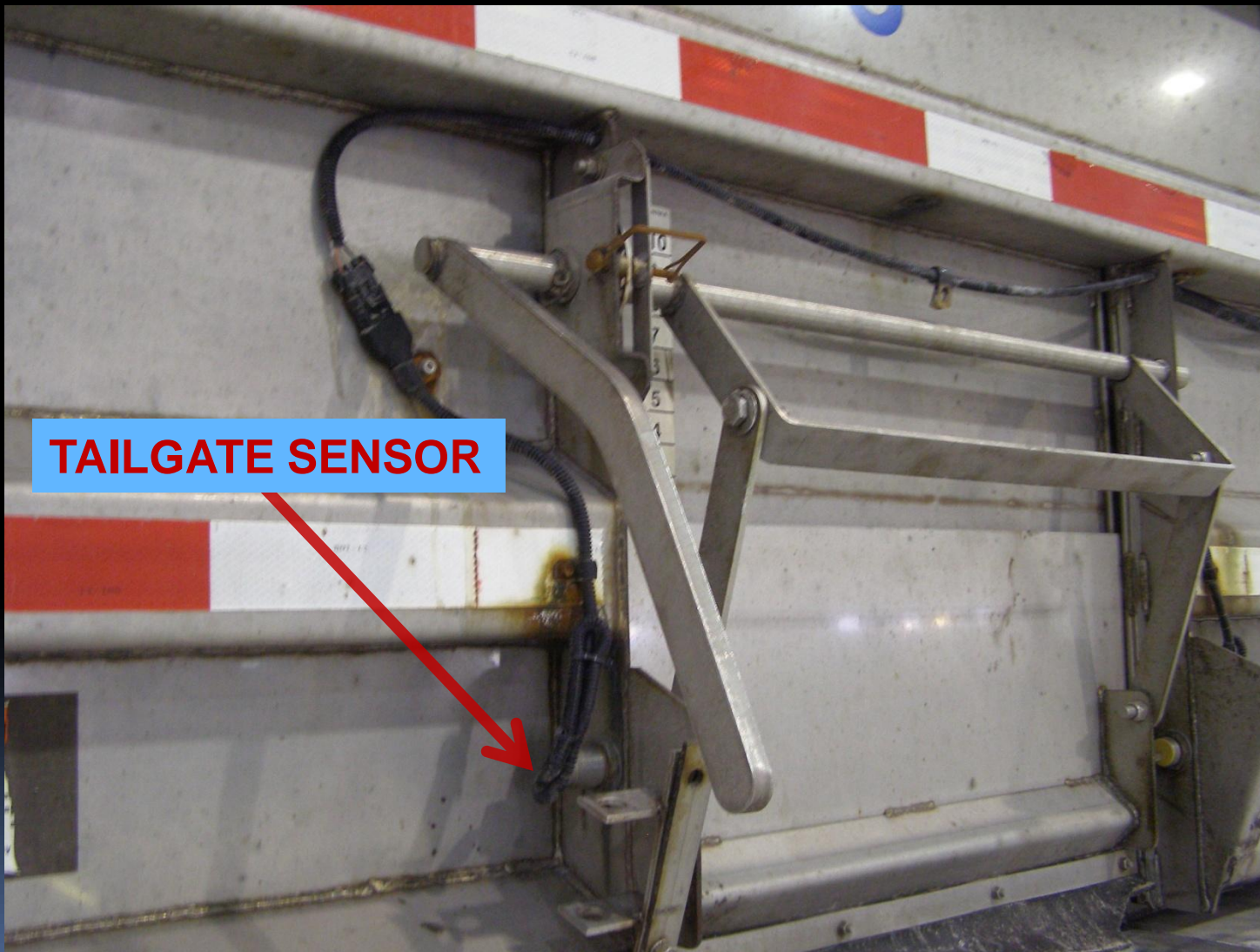




# TAILGATE SENSOR



**TAILGATE SENSOR**





# TAILGATE SENSOR



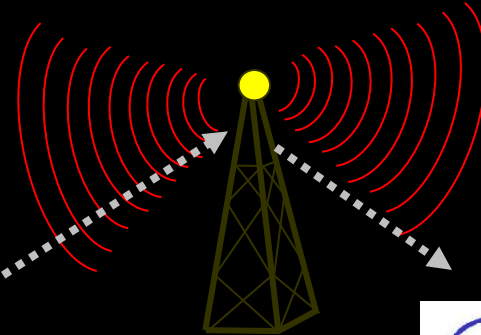


# How PreCise Works

**Accurate GPS data on  
location, heading,  
speed, elevation and  
time**



**Transmit via 802.11 or  
GPRS (AT&T/T-Mobile)**



**Securely access info  
from any web browser**



**5100/6100 Controller**

**Equipment Work  
Effort**



# Last Known Vehicle Location

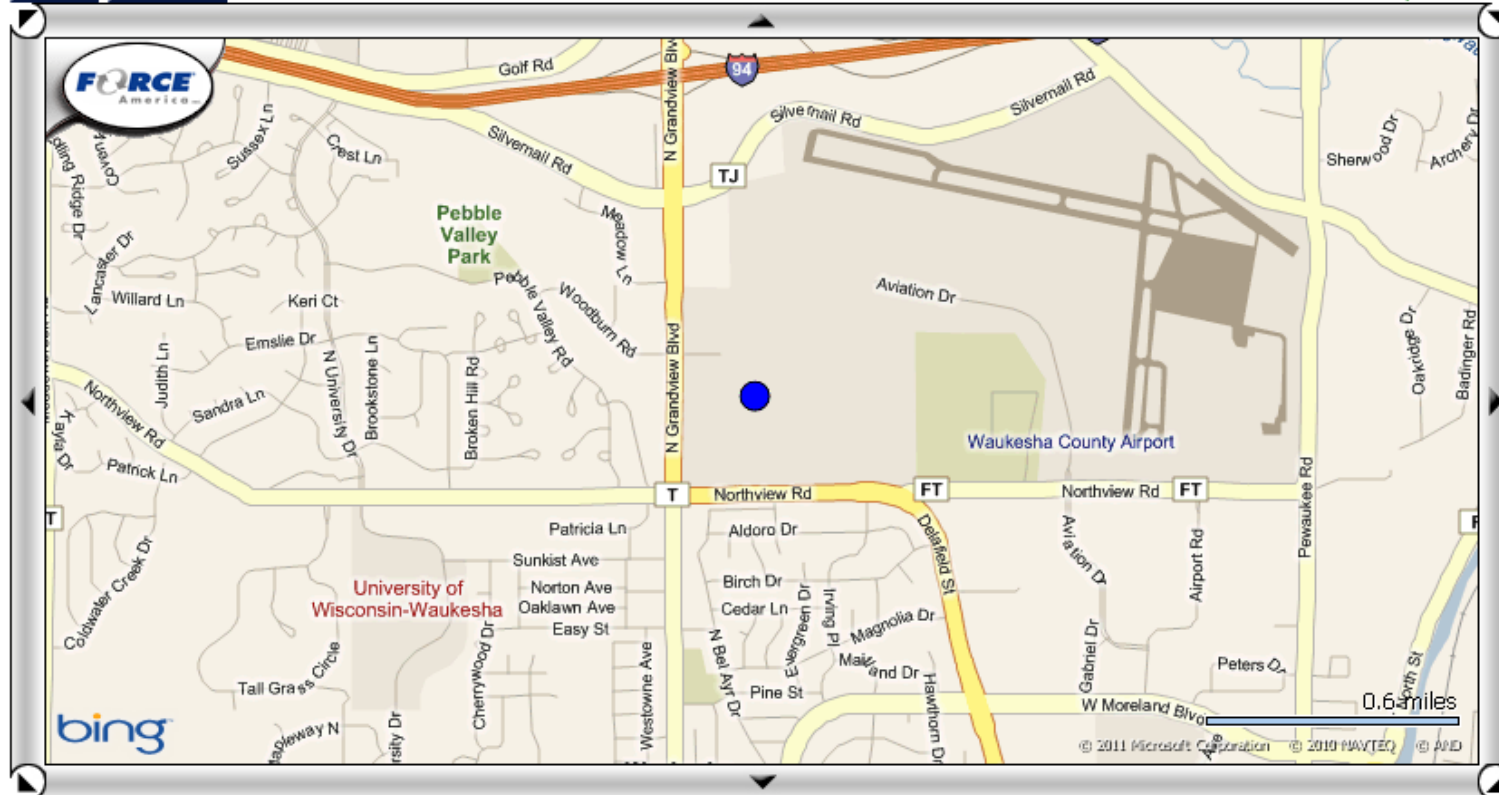
- Shows vehicle on Map








## H129 Last Known Location

H129 

Road Satellite

The Time Zone Reflected is: **Central Time (US & Canada)**



Legend	
Pushpins	
Individual	
Controller Event	
Available	
Unavailable	
In Maintenance	
Alert	
Out of Service	



# Pin Map

If an incident occurs, pin can be placed on map. This will then show the closest truck to the incident.

PreCise: Map Report - Mozilla Firefox

http://www.preciseinfox.com/BigFleetMap.aspx?f=98s=1#

2D 3D Road Aerial Bird's eye Labels

Legend

Fleets(Select Default)

☒ Snow Plow

Pushpins

☐ Default ☒

☒ Snow Plow

☒ Dump Truck

☐ Controller Event

☐ Available

☐ Unavailable

☐ Maintenance Alert

Favorites

☒ Available Geofences

[showhide mini-map](#)

☒ Auto-Update (2 Min.)

Last Update: 5/13 8:46:47 PM

[+find location](#)

Show Favorites

(+ -)

0.6 miles

Transferring data from ecn.dev.virtualearth.net...

**PIN :20777 W BLUEMOUND RD**

**4 - miles from Snow Plow**

Asset	Distance
H110	4-Miles
H123	4-Miles
H129	4-Miles
H79	4-Miles
H133	4-Miles

[- Remove From Map](#)

[+ Save To Favorites](#)

[More Information](#)



# Direction Map

- Determine fastest route and closest truck to incident.

## Driving Directions

To: Destination



Origin

[Edit or drag the route](#) • [Save this location](#)

▲ A-B: 6.4 miles, 10 min + [Add to route](#)

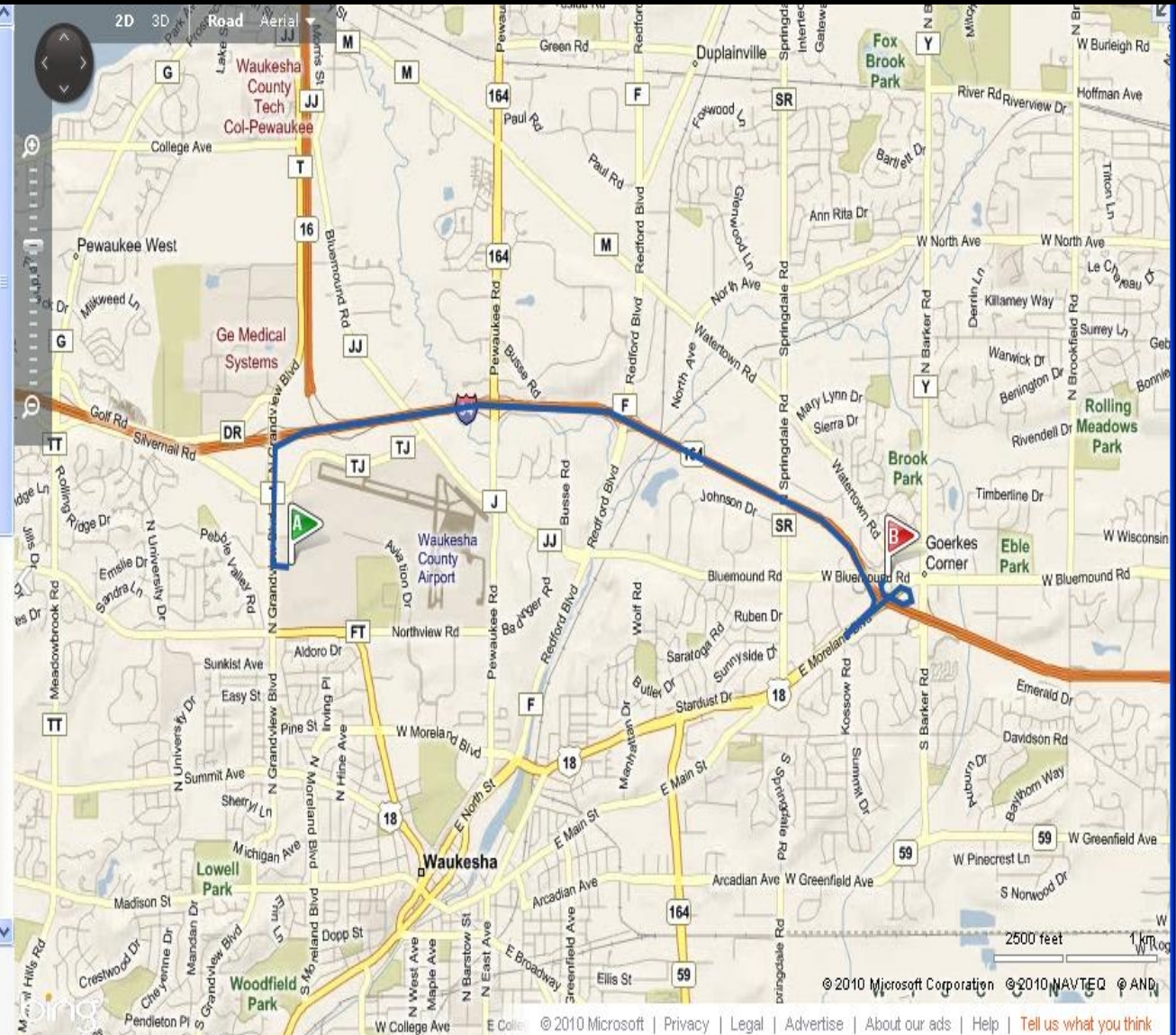
- 1 Depart **Woodburn Rd** 0.1 miles
- 2 Turn **right** onto **N Grandview Blvd / CR-T** 0.6 miles
- 3 Take ramp for **I-94 East** 4.2 miles
- 4 At exit **297**, take ramp **right** for **US-18 West / SR-164 South / E Moreland Blvd** toward **Waukesha** 0.6 miles
- 5 Make a U-turn at **Kossow Rd** 0.5 miles
- 6 Take ramp **right** for **US-18 West / SR-164 South** toward **Waukesha** 0.4 miles
- 7 Arrive at **Destination** 0.0 miles  
*If you reach US-18 West / E Moreland Blvd, you've gone too far*



Destination

[Edit or drag the route](#) • [Save this location](#)

WELCOME

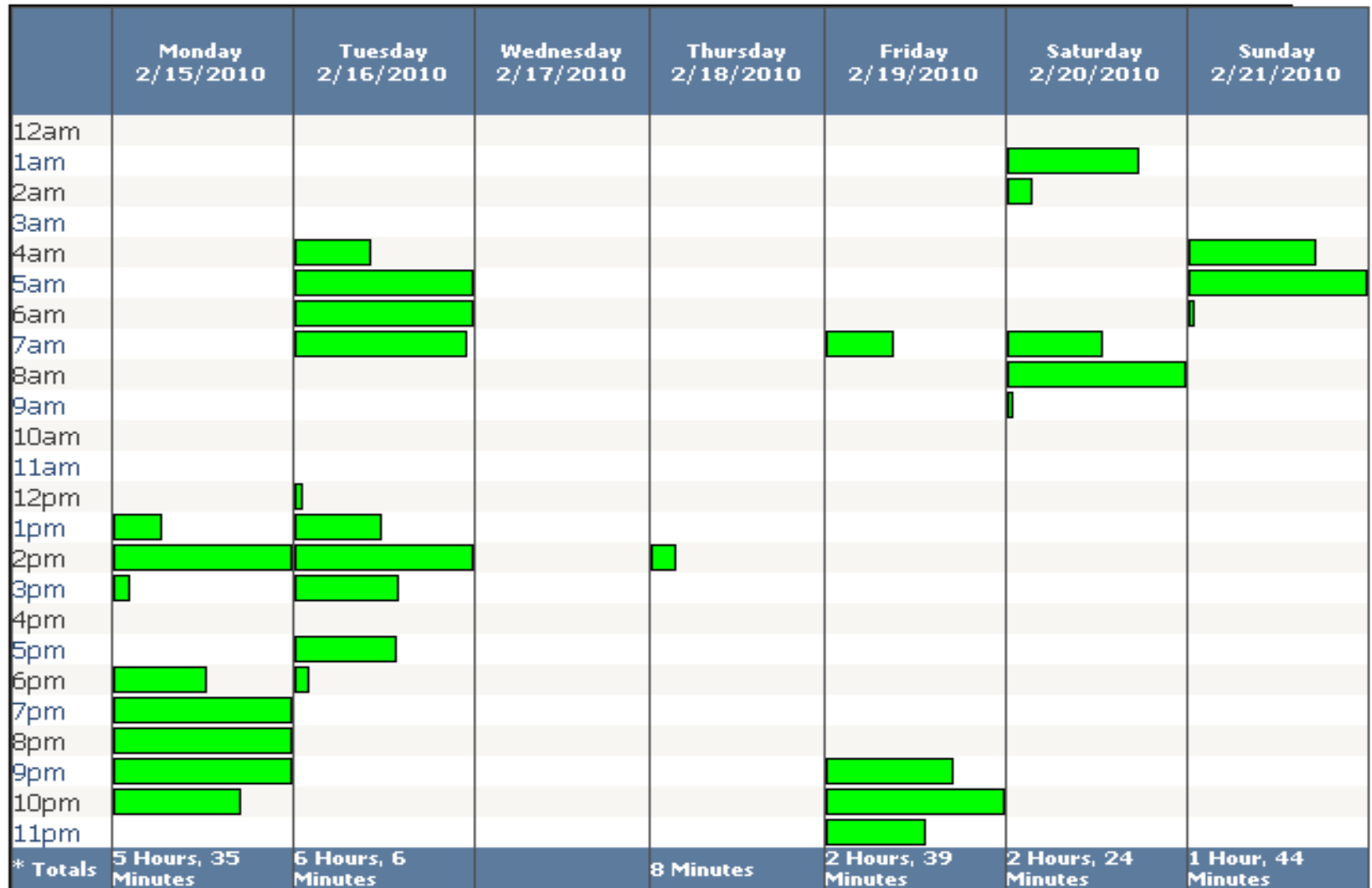


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# Weekly Vehicle Usage

- Day and Time of Vehicle Use
- Total of Daily Use



# Asset Stop Report

- Timesheet of the vehicle.
- Starts/Stops
- Plow Up/Down
- Direction of Travel and Speed
- Location and ability to pop up a map

Traveling South at 11 MPH	12/4/2010 9:44:26 AM	State Hwy 164
Traveling South East at 45 MPH	12/4/2010 9:48:34 AM	State Hwy 164
Plow UP/DN set to UP	12/4/2010 9:51:03 AM	State Hwy 164
Plow UP/DN set to DN	12/4/2010 9:51:31 AM	State Hwy 164
Traveling South East at 9 MPH	12/4/2010 9:55:18 AM	Lisbon Rd
Plow UP/DN set to UP	12/4/2010 9:55:22 AM	County Road K
Traveling East at 13 MPH	12/4/2010 9:55:23 AM	County Road K
Traveling North East at 7 MPH	12/4/2010 9:55:47 AM	County Road K
Traveling North at 7 MPH	12/4/2010 9:55:49 AM	Executive Dr
Traveling North West at 4 MPH	12/4/2010 9:55:51 AM	Executive Dr
Traveling West at 4 MPH	12/4/2010 9:55:53 AM	County Road K
Traveling North West at 0 MPH	12/4/2010 9:55:56 AM	County Road K
Traveling West at 4 MPH	12/4/2010 9:56:00 AM	County Road K
Traveling North West at 0 MPH	12/4/2010 9:56:28 AM	State Hwy 164
Plow UP/DN set to DN	12/4/2010 9:56:42 AM	State Hwy 164
Traveling North at 9 MPH	12/4/2010 9:56:44 AM	State Hwy 164
Traveling North East at 2 MPH	12/4/2010 9:58:05 AM	State Hwy 164

# Fleet Summary Report

- Idle time
- Odometer Readings
- Plow & Wing; Up/Down
- Hours

Fleet	Asset	VIN	Date	Odometer Begin	Odometer End	Total Miles	Engine Meter Begin	Engine Meter End	Engine Hours	Idle Hours	Windshield Time	Voltage	Input 1 Hrs Begin	Input 1 Hrs End	Input 1 Hrs Total	Input 2 Hrs Begin	Input 2 Hrs End	Input 2 Hrs Total
Snow Plow	H129		01/07/2011	97021	97288	267	626.8	634.8	8	1.6	6.4	12.8	503.9	505.4	1.4	48.7	49.3	0.6
Snow Plow	H129		01/08/2011	97288	97375	87	634.8	639.1	4.3	2	2.3	12.9	505.4	506.2	0.8	49.3	49.4	0.1
Snow Plow	H129		01/10/2011	97375	97413	38	639.1	640.8	1.7	0.8	0.9	12.7	506.2	506.3	0.1	49.4	49.5	0.1
Snow Plow	H86		01/07/2011	40893	40978	85	733.3	738.5	5.2	1.6	3.6	12.1	638.5	641.6	3.1	248.2	248.3	0.1
Snow Plow	H86		01/10/2011	40978	41063	85	738.5	743.2	4.7	2.4	2.3	13.1	641.6	646.3	4.7	248.3	248.4	0.1
Snow Plow	H37		01/07/2011	77324	77537	213	636.1	648.5	12.4	6.5	5.9	12	562	572.7	10.7	32.1	36.7	4.6
Snow Plow	H37		01/10/2011	77537	77583	46	648.5	652.2	3.7	2.5	1.2	12.9	572.7	575.9	3.2	36.7	36.8	0.1
Snow Plow	H133		01/07/2011	77887	78112	225	441.9	449.4	7.5	1.5	6	12.2	375.1	377.1	2	45.8	46	0.3

# Material Usage Report

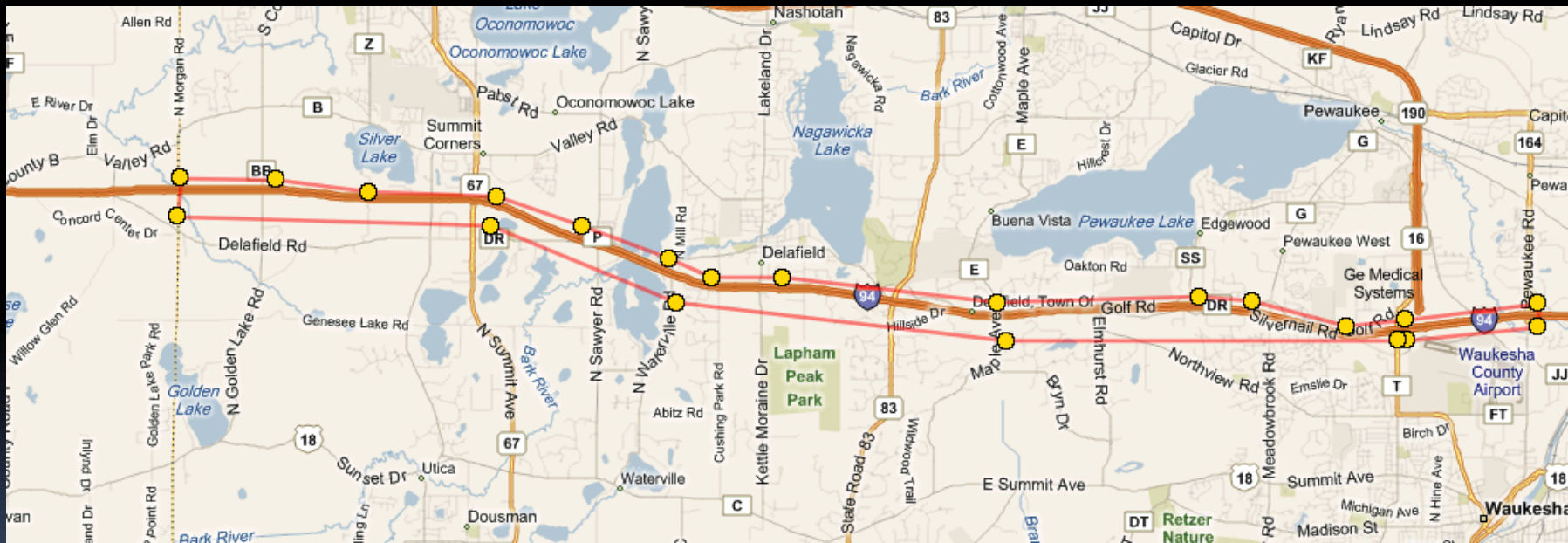
- Determine amount of material used on each Patrol Section, I-94 West
- By Truck
- Engine Hours, Distance Traveled, Amount of Salt and Prewet

Material Usage							
Reporting from Tuesday, January 11, 2011 12:00:00 AM through Tuesday, January 11, 2011 11:59:59 PM							
Snow Plow							
Asset	Operator(s)	Engine Hours	Total Distance Traveled (mi)	Total Distance Spreading (mi)	Granular SALT (Actual lbs)	Prewet Applied to SALT (Actual gals)	Prewet Applied to SALT (Combined gals)
H118	Unknown	0:3:1	5.99	11.07	165	0	0
H129	Unknown	0:32:11	197.33	38.72	59132	218	218
H133	Unknown	0:8:30	55.82	1.12	9352	58	58
H37	Unknown	0:23:48	113.51	3.92	13893	56	56.8
H86	Unknown	0:0:0	59.84	4.31	15495	38	38
Totals		1:7:30	432.49	59.13	98037	370	370.8



# Geofences

- Geofence can be drawn to cover Patrol Truck Plow Route
- Allows reports to be customized to determine how much material was used on section or different sections.



# AVL Reporting by zone or geofence

- Shows material used on patrol truck section or zone.
- Total distance traveled in zone and distance spreading material.
- Prewet totals applied to salt.

## Material Usage

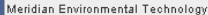
Reporting from Monday, January 31, 2011 12:00:00 AM through Wednesday, February 02, 2011 11:59:59 PM

## Snow Plow

Asset	Operator(s)	Engine Hours	Total Distance Traveled (mi)	Total Distance Spreading (mi)	Granular SALT (Actual lbs)	Granular SALT (Combined lbs)	Prewet Applied to SALT (Actual gals)	Prewet Applied SALT (Combined g)
H129	Unknown	28:39	785.91	452.54	157001	157001	684	684
Totals		28:39	785.91	452.54	157001	157001	684	684

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 



# Maintenance Decision Support System

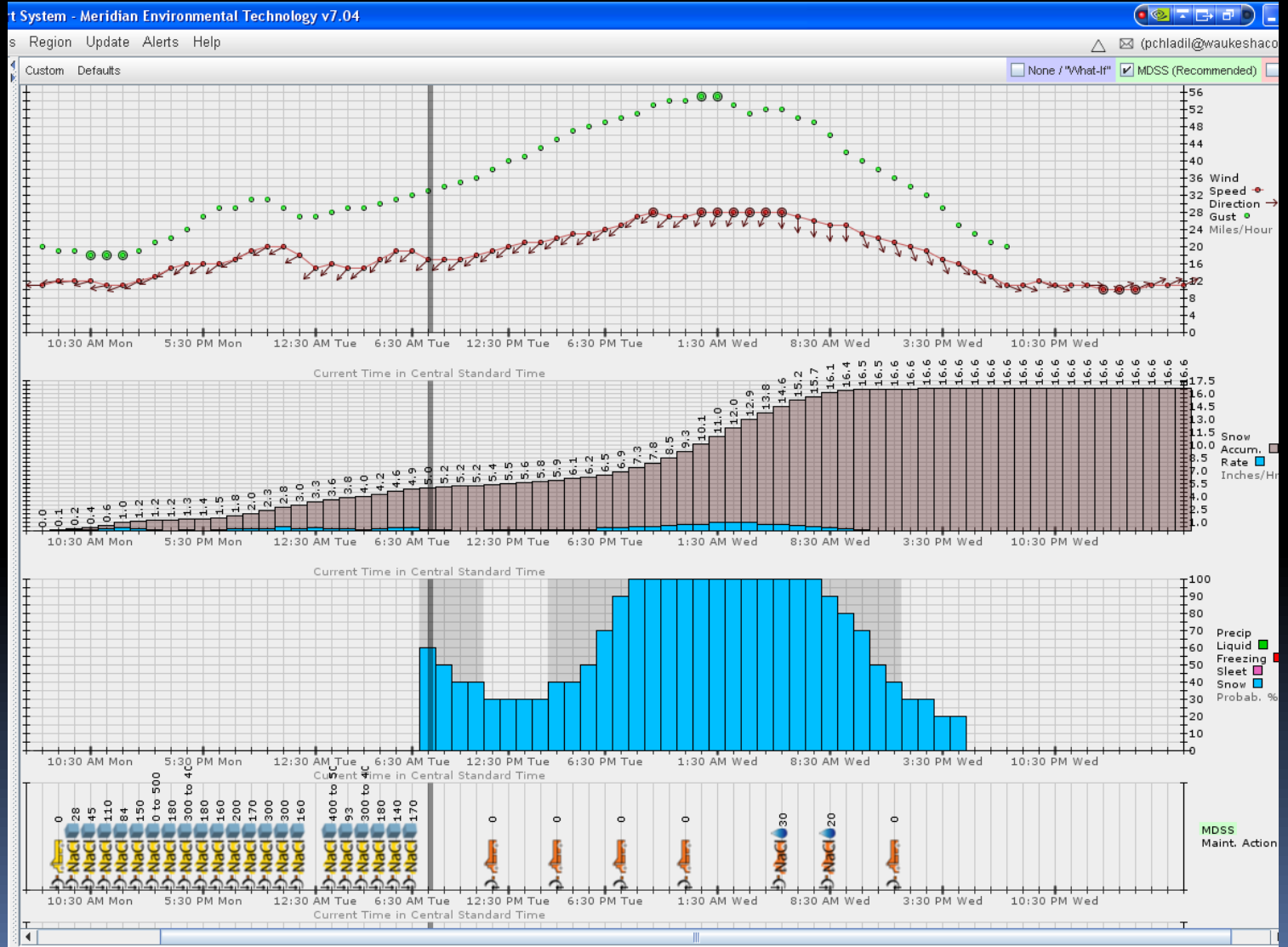
- Weather Forecast using Truck Data to update future forecasts.
- Customizable down to Route by lane.

I-94 (STH 67 to STH 83, Driving) WI-31-1										I-94 (STH 67 to STH 83, Passing) WI-31-2										
Date Time	Air Temp	Road Temp	Road Cond	Maint Action	% Ice	Blowing Snow Alerts	Notes	Road Frost Prob	Road CmpSn Depth	Wind Dir / Spd	Cloud Cvr	Precip Prob	Freeze Prob	Snow Prob	Liquid Prob	Sleet Prob	Precip Type	Snw Rate	Snw Accum	Date Time
Wed 11:00AM	20	20	Dry	☞ 🚛	0	0	WR	5.000	0.000	↙ NNW 22635	☁	50	0	50	0	0	SN	0.02	18.94	Wed 11:00AM
Wed 10:00AM	19	19	Dry		0	0	WR	5.000	0.000	↙ NNW 23640	☁	60	0	60	0	0	SN	0.14	18.92	Wed 10:00AM
Wed 09:00AM	18	18	Dry		0	0	WR	10.000	0.000	↙ N 24640	☁	80	0	80	0	0	SN	0.14	18.78	Wed 09:00AM
Wed 08:00AM	19	19	Dry		0	0	WR	15.000	0.000	↙ N 26640	☁	80	0	80	0	0	SN	0.28	18.64	Wed 08:00AM
Wed 07:00AM	19	19	Dry		0	0	WR	15.000	0.000	↙ N 28645	☁	100	0	100	0	0	SN	0.32	18.36	Wed 07:00AM
Wed 06:00AM	20	20	Dry	☞ 🚛	0	0	WR	20.000	0.000	↙ N 28645	☁	100	0	100	0	0	SN	0.32	18.04	Wed 06:00AM
Wed 05:00AM	20	20	Dry		0	0	WR	20.000	0.000	↙ N 28645	☁	100	0	100	0	0	SN	0.48	17.72	Wed 05:00AM
Wed 04:00AM	21	20	Dry		0	0	WR	25.000	0.000	↙ N 27645	☁	100	0	100	0	0	SN	0.64	17.24	Wed 04:00AM
Wed 03:00AM	21	20	Dry		0	0	WR	25.000	0.000	↙ NNE 27645	☁	100	0	100	0	0	SN	0.96	16.60	Wed 03:00AM
Wed 02:00AM	21	20	Dry	☞ 🚛	0	0	WR	25.000	0.000	↙ NNE 27640	☁	100	0	100	0	0	SN	1.08	15.64	Wed 02:00AM
Wed 01:00AM	22	21	Dry		0	0	WR	25.000	0.000	↙ NNE 28640	☁	100	0	100	0	0	SN	1.08	14.56	Wed 01:00AM
Wed 12:00AM	21	20	Dry		0	0	WR	20.000	0.000	↙ NNE 28640	☁	100	0	100	0	0	SN	0.96	13.48	Wed 12:00AM
Tue 11:00PM	20	19	Dry		0	0	WR	15.000	0.000	↙ NNE 26640	☁	100	0	100	0	0	SN	0.96	12.52	Tue 11:00PM
Tue 10:00PM	21	20	Dry	☞ NaCl	20	0	WR	15.000	0.000	↙ NNE 27640	☁	100	0	100	0	0	SN	0.96	11.56	Tue 10:00PM
Tue 09:00PM	21	20	Dry		0	0	WR	15.000	0.000	↙ NE 28640	☁	100	0	100	0	0	SN	0.96	10.60	Tue 09:00PM
Tue 08:00PM	21	20	Dry		0	0	WR	15.000	0.000	↙ NE 24640	☁	100	0	100	0	0	SN	0.96	9.64	Tue 08:00PM
Tue 07:00PM	21	20	Dry		0	0	WR	10.000	0.000	↙ NE 24640	☁	100	0	100	0	0	SN	0.80	8.68	Tue 07:00PM
Tue 06:00PM	21	20	Dry	☞ NaCl	20	0	WR	10.000	0.000	↙ NE 23640	☁	100	0	100	0	0	SN	0.64	7.88	Tue 06:00PM
Tue 05:00PM	22	21	Dry		0	0	WR	5.000	0.000	↙ NE 24640	☁	100	0	100	0	0	SN	0.48	7.24	Tue 05:00PM
Tue 04:00PM	22	21	Dry		0	0	WR	5.000	0.000	↙ NE 26635	☁	80	0	80	0	0	SN	0.28	6.76	Tue 04:00PM
Tue 03:00PM	22	22	Dry		0	0	WR	5.000	0.000	↙ NNE 25	☁	60	0	60	0	0	SN	0.14	6.48	Tue 03:00PM
Tue 02:00PM	23	23	Dry		0	0	WR	5.000	0.000	↙ NNE 24630	☁	40	0	40	0	0	SN	0.14	6.34	Tue 02:00PM
Tue 01:00PM	20	23	Dry	☞ 🚛	0	0	WR	5.000	0.000	↙ NE 27	☁						SN	0.40	6.20	Tue 01:00PM
Tue 12:00PM	21	23	Slush	☞ NaCl	130	30	R	5.000	0.000	↙ NNE 25641	☁						SN	0.40	5.80	Tue 12:00PM
Tue 11:00AM	20	22	Dry	☞ NaCl	130	0	R	5.000	0.000	↙ NE 25638	☁						SN	0.35	5.40	Tue 11:00AM
Tue 10:00AM	20	21	Slush	☞ NaCl	140	21	R	10.000	0.000	↙ NE 22636	☁						SN	0.22	5.05	Tue 10:00AM
Tue 09:00AM	20	20	Slush	☞ NaCl	170	37		15.000	0.000	↙ NE 19634	☁						SN	0.29	4.83	Tue 09:00AM
Tue 08:00AM	18	19	Slush	☞ NaCl	180	59		10.000	0.000	↙ NE 18633	☁						SN	0.43	4.54	Tue 08:00AM
Tue 07:00AM	18	19	Slush	☞ NaCl	180	44		20.000	0.000	↙ NE 17632	☁						SN	0.34	4.11	Tue 07:00AM
Tue 06:00AM	18	19	Slush	☞ NaCl	160	45		15.000	0.000	↙ NE 19631	☁						SN	0.40	3.77	Tue 06:00AM
Tue 05:00AM	19	19	Slush	☞ NaCl	180	24		20.000	0.000	↙ NNE 17630	☁						SN	0.26	3.37	Tue 05:00AM
Tue 04:00AM	19	18	Slush	☞ NaCl	150	37		20.000	0.000	↙ NE 16629	☁						SN	0.17	3.11	Tue 04:00AM
Tue 03:00AM	19	20	Slush	☞ NaCl	180	69		20.000	0.000	↙ NE 14628	☁						SN	0.16	2.94	Tue 03:00AM
Tue 02:00AM	19	20	Slush	☞ NaCl	500	56		20.000	0.000	↙ NE 15628	☁						SN	0.23	2.78	Tue 02:00AM
Tue 01:00AM	19	20	Slush	☞ NaCl	160	59		20.000	0.000	↙ NE 15626	☁						SN	0.38	2.55	Tue 01:00AM
Tue 12:00AM	19	19	Slush	☞ NaCl	400	48		25.000	0.000	↙ NE 15626	☁						SN	0.36	2.17	Tue 12:00AM
Mon 11:00PM	19	20	Slush	☞ NaCl	160	73		20.000	0.000	↙ ENE 19627	☁						SN	0.23	1.81	Mon 11:00PM
Mon 10:00PM	19	20	Slush	☞ NaCl	300	61		20.000	0.000	↙ NE 20630	☁						SN	0.44	1.58	Mon 10:00PM
Mon 09:00PM	20	20	Slush		64	0		25.000	0.000	↙ ENE 20632	☁						SN	0.28	1.14	Mon 09:00PM
Mon 08:00PM	19	20	Slush	☞ NaCl	400	47		15.000	0.000	↙ ENE 18627	☁						SN	0.28	0.86	Mon 08:00PM
Mon 07:00PM	19	19	Dry	☞ NaCl	170	0		15.000	0.000	↙ NE 15629	☁						SN	0.28	0.58	Mon 07:00PM
Mon 06:00PM	19	19	Dry	☞ NaCl	160	0		10.000	0.000	↙ NE 16628	☁						SN	0.08	0.30	Mon 06:00PM
Mon 05:00PM	19	20	Dry	☞ NaCl	150	0		10.000	0.000	↙ NE 17625	☁						SN	0.08	0.22	Mon 05:00PM
Mon 04:00PM	20	22	Dry	☞ NaCl	140	0		5.000	0.000	↙ NE 15623	☁						SN	0.07	0.14	Mon 04:00PM
Mon 03:00PM	20	22	Dry	☞ NaCl	300	0		5.000	0.000	↙ ENE 14622	☁						SN	0.00	0.07	Mon 03:00PM
Mon 02:00PM	20	23	Slush	☞ NaCl	170	57		5.000	0.001	↙ ENE 12620	☁						SN	0.07	0.07	Mon 02:00PM



# Maintenance Decision Support System

- Weather Forecast using Truck Data to update future forecasts.
- Customizable down to Route by lane.



# Maintenance Decision Support System

- Truck report shows treatment rates, plow up, plow down, temperature and which lane treated.

2011-02-01 01:26:13 CDT	I-94, STH 67 to STH 83, Passing	SE	8	BLADE DOWN	PREWET SALT @ 300
2011-02-01 01:26:19 CDT	I-94, STH 67 to STH 83, Passing	VRB	3	BLADE DOWN	PREWET SALT @ 300
2011-02-01 01:26:24 CDT	I-94, STH 67 to STH 83, Passing	UNK	0	BLADE DOWN	PREWET SALT @ 300
2011-02-01 01:26:26 CDT	I-94, STH 67 to STH 83, Passing	VRB	6	BLADE DOWN	PREWET SALT @ 300
2011-02-01 01:26:30 CDT	I-94, STH 67 to STH 83, Passing	S	16	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:27:05 CDT	I-94, STH 67 to STH 83, Passing	VRB	13	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:27:08 CDT	I-94, STH 67 to STH 83, Passing	E	5	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:27:12 CDT	I-94, STH 67 to STH 83, Passing	VRB	6	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:27:16 CDT	I-94, STH 67 to STH 83, Passing	VRB	13	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:27:56 CDT	I-94, STH 67 to STH 83, Passing	VRB	9	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:28:18 CDT	I-94, STH 67 to STH 83, Passing	VRB	7	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:28:30 CDT	I-94, STH 67 to STH 83, Passing	VRB	19	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:29:03 CDT	I-94, STH 67 to STH 83, Passing	VRB	12	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:29:06 CDT	I-94, STH 67 to STH 83, Passing	VRB	2	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:29:10 CDT	I-94, STH 67 to STH 83, Passing	VRB	13	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:29:44 CDT	I-94, STH 67 to STH 83, Passing	VRB	19	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:29:55 CDT	I-94, STH 67 to STH 83, Passing	VRB	12	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:30:00 CDT	I-94, STH 67 to STH 83, Passing	VRB	15	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:30:24 CDT	I-94, STH 67 to STH 83, Passing	E	24	BLADE DOWN	PREWET SALT @ 400
2011-02-01 01:30:30 CDT	I-94, STH 83 to CTH G, Passing	E	28	BLADE DOWN	PREWET SALT @ 500
2011-02-01 01:30:35 CDT	I-94, STH 83 to CTH G, Passing	E	30	BLADE DOWN	PREWET SALT @ 500
2011-02-01 01:31:30 CDT	I-94, STH 83 to CTH G, Passing	E	34	BLADE DOWN	PREWET SALT @ 500
2011-02-01 01:32:19 CDT	I-94, STH 83 to CTH G, Passing	E	40	BLADE DOWN	PREWET SALT @ 500
2011-02-01 01:32:30 CDT	I-94, STH 83 to CTH G, Passing	E	42	BLADE DOWN	PREWET SALT @ 500
2011-02-01 01:33:13 CDT	I-94, STH 83 to CTH G, Passing	E	42	BLADE DOWN	PREWET SALT @ 500
2011-02-01 01:33:56 CDT	I-94, STH 83 to CTH G, Passing	E	42	BLADE DOWN	PREWET SALT @ 500
2011-02-01 01:34:30 CDT	I-94, STH 83 to CTH G, Passing	E	40	BLADE DOWN	PREWET SALT @ 500
2011-02-01 01:35:18 CDT	I-94, STH 83 to CTH G, Passing	E	33	BLADE DOWN	PREWET SALT @ 500
2011-02-01 01:35:27 CDT	I-94, STH 83 to CTH G, Passing	E	25	BLADE UP	PREWET SALT @ 500
2011-02-01 01:36:12 CDT	I-94, STH 83 to CTH G, Passing	VRB	16	BLADE UP	PREWET SALT @ 500
2011-02-01 01:36:17 CDT	I-94, STH 83 to CTH G, Passing	VRB	14	BLADE UP	PREWET SALT @ 500
2011-02-01 01:36:30 CDT	I-94, STH 83 to CTH G, Passing	NW	17	BLADE UP	PREWET SALT @ 500
2011-02-01 01:36:50 CDT	I-94, STH 83 to CTH G, Passing	VRB	9	BLADE UP	PREWET SALT @ 500

2012 Operating Budget

# DPW/HIGHWAY OPERATIONS

